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AGILENT TECHNOLOGIES, INC.
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EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2195

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/644,011

Applicant(s)

PAGE, JOHN

Examiner

KENNETH TANG

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/20/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-19 are presented for examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 19 is directed to non-statutory subject matter. In claim 19, the apparatus that comprises a flag, a master, and a clone can be interpreted to one of ordinary skill in the art as being software, per se.**

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 recites the limitation "the file partition" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is unclear which file partition “the file partition” refers to. In other words, it is unclear whether “the partition” refers to the “non-writable file partition” or to a “writable file partition”. Since the scope of the claim cannot be ascertained, it is found to be indefinite. Claims 2-9 are also rejected as being dependent claims of rejected claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-15 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaya (US 6,330,712) in view of Raves et al. (hereinafter Raves) (US 2003/0182500 A1).

6. As to claim 1, Iwaya teaches a method comprising:

automatically self-creating an overlay in response to receiving writes directed to a non-writable memory (compressed ROM patching) (Fig. 3, items 31, 32).

7. Iwaya is silent in utilizing an image of a master system and partitioning wherein a non-writable file partition comprises an operating system. However, Raves teaches a write filtering protections that could be used with respect to partitioned memory, wherein an operating system image is stored in a partition (Fig. 3, "OS", "Mirrored OS"; page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026]). Iwaya and Raves are analogous art because they are both in the same field of endeavor and solving the same problem of improving write operations/protections. One of ordinary skill in the art would have known to modify Iwaya such that it would include the feature of partitioning, wherein an operating system is stored in a non-writable file partition, as taught in Raves. The suggestion/motivation for doing so would have been to provide the predicted result of improving the write protection system (page 1, [0003]-[0005]). Therefore, it would have been obvious to combine Iwaya and Raves to obtain the invention of claim 1.

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8. As to claim 2, Iwaya (Fig. 3, items 31, 32, see Abstract) and Raves (page 2, [0026]) teaches wherein the image comprises code to automatically create the overlay based on the absence of an overlay partition in the image.

9. As to claim 3, Iwaya (Fig. 3, items 31, 32, see Abstract, col. 5, lines 40-42) and Raves (page 1, [0002], [0006]-[0009], etc.) teaches wherein the image is configured to perform the automatic self-creating when the image is booted.

10. As to claim 4, Iwaya (Fig. 3, items 31, 32, col. 4, lines 17-21 and 60-67, col. 5, lines 40-42) in view of Raves (page 1, [0002], [0006]-[0009], etc.) teaches wherein the image comprises a flag that indicates that the overlay has not been created, and wherein the automatic self-creating occurs in response to when the image is booted.

11. As to claim 5, Raves teaches wherein the operating system is an embedded operating system (Microsoft Windows Operating System) (page 1, [0003], lines 1-7).

12. As to claim 6, Raves teaches wherein the embedded operating system is a Microsoft Windows embedded operating system (page 1, [0003], lines 1-7).

13. As to claim 7, Iwaya (see Abstract, col. 3, lines 25-40) and Raves (Fig. 3, "OS", "Mirrored OS"; page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026], [0004]) teaches wherein the operating system comprises a file system module that makes the non-writable file partition available as a writable file system, and where the overlay and embedded write filter function together in the operating system as a layer between the file system module and one or more storage media that store the data of the non-writable file partition and the data of the overlay, whereby the combined data so stored is transparently made available through the file system module as the writable file system.

14. As to claim 8, it is rejected for the same reasons as stated in the rejection of claim 4.

15. As to claim 9, Iwaya (col. 3, lines 25-40) and Raves ([0034]) teach wherein the file system module implements a standard file system type, and wherein the overlay has a nonstandard file system type.

16. As to claim 10, Iwaya (col. 3, lines 25-40) and Raves ([0034]) teaches wherein the overlay's nonstandard file system type renders it unrecognizable by cloning tools that can recognize and clone the standard file system type.

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17. As to claim 11, Raves teaches a machine readable storage storing the image according to claim 1 ([0023]).

18. As to claim 12, Iwaya teaches a method comprising:

configuring the master system with a setting for indicating that the overlay is needed and has not been provided (write filtering such as ROM patching provides the overlay – link flags and the index table are used to configure and track the system) (Fig. 3, items 31, 32, Fig. 2b, item 5124, col. 1, lines 57-67, col. 3, lines 20-40, col. 5, lines 40-42).

19. It is noted that the preamble is not given patentable weight. Iwaya is silent in after configuring, creating a master image of the master system and creating a clone of the master system on storage of another system based on the master image. However, Raves teaches a write filtering protections that could be used with respect to partitioned memory, wherein an operating system image is stored in a partition (Fig. 3, "OS", "Mirrored OS"; page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026]). Iwaya and Raves are analogous art because they are both in the same field of endeavor and solving the same problem of improving write operations/protections. One of ordinary skill in the art would have known to modify Iwaya such that it would include the feature of partitioning, wherein an operating system is stored in a non-writable file partition, as taught in Raves. The suggestion/motivation for doing so would have been to provide the predicted result of improving the write protection system (page 1, [0003]-[0005]). Therefore, it would have been obvious to combine Iwaya and Raves to obtain the invention of claim 12.

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20. As to claim 13, Iwaya (Fig. 3, items 31, 32, Fig. 2b, item 5124, col. 1, lines 57-67, col. 3, lines 20-40, col. 5, lines 40-42) and Raves (page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026]) teach further comprising automatically providing the clone of the master system with an overlay based on the setting of the flag in the clone of the master system, where the overlay provides file-system level write functionality to the non-writable volume or partition of the clone system.

21. As to claim 14, Iwaya (Fig. 3, items 31, 32, Fig. 2b, item 5124, col. 1, lines 57-67, col. 3, lines 20-40, col. 5, lines 40-42) and Raves (lines 3-5 of [0025], last 5 lines of [0023], [0026]) teaches the storage storing the clone of the master system that was automatically provided with the overlay.

22. As to claim 15, Raves teaches the storage storing the clone of the master system (last 5 lines of [0023], [0026]).

23. As to claim 18, Iwaya teaches a storage storing a condensed (compressed) system image comprising an operating system, where the condensed system image is capable of being exploded (decompressed) to install the operating system (patch, etc.) on disk drives with different sizes or configurations and an overlay partition and write filter can be self-created

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(because of compressed data, it could be installed on large storage areas or small/portable devices with small storage areas) (Abstract, col. 3, lines 20-40).

Miller is silent in teaching partitions and the creation of the overlay/write filter when booted. However, Raves teaches a write filter that redirects write requests to an overlay that could be used with respect to partitioned memory (Fig. 3, "OS", "Mirrored OS"; page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026]). Hill and Raves are analogous art because they are both in the same field of endeavor of operating system imaging. One of ordinary skill in the art would have known to modify Hill such that it would include the feature of partitioning and a write filter when booted, as taught in Raves. The suggestion/motivation for doing so would have been to provide the predicted result of improving the write protection system (page 1, [0003]-[0005]). Therefore, it would have been obvious to combine Hill and Raves to obtain the invention of claim 18.

24. As to claim 19, it is rejected for the same reasons as stated in the rejection of claim 12.

25. **Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (hereinafter Miller) (US 7,120,786 B2) in view of Iwaya (Us 6,330,712 B1).**

26. As to claim 16, Miller teaches a method (see Abstract), comprising:

building an operating system install comprising operating system files on a target drive, where the operating system install is configured to have an overlay providing write capability to a non-writable area (col. 3, lines 49-67 through col. 4, lines 1-14); then

performing a first boot of the target drive (see Fig. 4, items 302, 404, 406, col. 2, lines 12-26);

configuring the operating system install to have both a resealed or logical first-boot state (col. 9, lines 13-22, col. 3, lines 49-67 through col. 4, lines 1-14).

27. Miller is silent in having partitions, disabling the overlay, as well as determining that the overlay is needed and has not been initialized. However, Iwaya teaches a compressed ROM data patching system that creates/initializes an overlay/patch in a different partition and determines if it is needed through the use of link flags (Fig. 3, items 31, 32, Fig. 2(b), items 5122, 5123, 5124, col. 1, lines 57-67, col. 2, lines 5-38). One of ordinary skill in the art would have known to modify Miller such that it would include the features of Iwaya. The suggestion/motivation for doing so would have been to provide the predicted result of increasing functionality, provide updates and/or to correct errors to the system. Therefore, it would have been obvious to combine Miller and Iwaya to obtain the invention of claim 16.

28. As to claim 17, Miller (Fig. 1, items 156, 158, 160, 162, Fig. 2, item 202) and Iwaya (because of compressed data, it could be installed on large storage areas or small/portable devices with small storage areas) (Abstract, col. 3, lines 20-40) teach further comprising creating

a condensed image of the operating system using an imaging tool, where the condensed image is capable of being installed on disk drives with different sizes or configurations.

29. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al. (hereinafter Hill) (US 2003/0221083 A1) in view of Raves et al. (hereinafter Raves) (US 2003/0182500 A1).

30. As to claim 1, Hill teaches a method of cloning a master system (see Abstract), the method comprising:

enabling an image of the master system, that includes a non-writable file, to automatically self-create an overlay that receives writes directed to the file (page 1, [0008]; page 3, [0022], [0024]-[0025], lines 1-5 of [0027]; page 4, lines 1-4 of [0032]).

31. Hill is silent in teaching partitioning wherein the non-writable file partition comprises an operating system. Raves teaches a write filter that could be used with respect to partitioned memory, wherein an operating system is stored in a partition (Fig. 3, "OS", "Mirrored OS"; page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026]). Hill and Raves are analogous art because they are both in the same field of endeavor and solving the same problem of improving write operations/protections. One of ordinary skill in the art would have known to modify Hill such that it would include the feature of partitioning, wherein an operating system is stored in a partition, as taught in Raves. The suggestion/motivation for doing so would have been to

provide the predicted result of improving the write protection system (page 1, [0003]-[0005]).

Therefore, it would have been obvious to combine Hill and Raves to obtain the invention of claim 1.

32. As to claim 2, Hill (page 4, [0032], page 1, [0008]) and Raves (page 2, [0026]) teaches wherein the image comprises code to automatically create the overlay based on the absence of an overlay partition in the image.

33. As to claim 3, Hill (page 5, [0036]) and Raves (page 1, [0002], [0006]-[0009], etc.) teaches wherein the image is configured to perform the automatic self-creating when the image is booted.

34. As to claim 4, Hill teaches wherein the image overlay has not been created, and wherein the automatic self-creating occurs in response to when the image is booted (see rejection of claims 1 and 3). Hill is silent in teaching the use and configuration of flags based on the events described above. However, it is well known in the art of computer processing and Official Notice is taken that flags are used to store a binary value or code that has an assigned meaning. Flags are typically found as members of a defined data structure and the meaning of the value contained in a flag will generally be defined in relation to the data structure it is part of. In many cases, the binary value of a flag will be understood to represent one of several possible states or statuses. In other cases, the binary values may represent one or more attributes in a bit field,

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often related to abilities or permissions, such as “can be written to” or “can be deleted”. One of ordinary skill in the art would have been able to modify Hill such that it would include the well known features of flag handling in computer processing. The suggestion/motivation for doing so would have been to provide the predicted result of having a tool to mark or designate data structures for future processing, thus improving the control of the processing.

35. As to claim 5, Hill (page 1, [0003], lines 10-18) and Raves (page 1, [0003], lines 1-7) teaches wherein the operating system is an embedded operating system.

36. As to claim 6, Raves teaches wherein the embedded operating system is a Microsoft Windows embedded operating system (page 1, [0003], lines 1-7).

37. As to claim 7, Hill teaches wherein the operating system comprises a file system module that makes the non-writable file partition available as a writable file system, and where the overlay and embedded write filter function together in the operating system as a layer between the file system module and one or more storage media that store the data of the non-writable file partition and the data of the overlay, whereby the combined data so stored is transparently made available through the file system module as the writable file system (page 3, [0023]).

38. As to claim 8, it is rejected for the same reasons as stated in the rejection of claim 4.

39. As to claim 9, Hill teaches wherein the file system module implements a standard file system type, and wherein the overlay has a nonstandard file system type (page 3, [0023]).

40. As to claim 10, Hill teaches wherein the overlay's nonstandard file system type renders it unrecognizable by cloning tools that can recognize and clone the standard file system type (page 3, [0023]).

41. As to claim 11, Hill teaches a machine readable storage storing the image according to claim 1 (page 1, [0007], page 3, lines 7-9 of [0022]).

42. **Claims 12-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al. (hereinafter Hill) (US 2003/0221083 A1).**

43. As to claim 12, Hill teaches a method of cloning a master system configured with a non-writable volume or partition comprising an operating system, where the master system is

configured to provide an overlay to store updates directed to the non-writable volume or partition, the method comprising:

configuring the master system with a setting for indicating that the overlay is needed and has not been provided (result from the “write filter”) (page 3, [0022], page 1, [0008]);

after configuring, creating a master image of the master system (new operating system image) (page 1, [0008]; page 3, [0022], [0024]-[0025], lines 1-5 of [0027]; page 4, lines 1-4 of [0032]); and

creating a clone of the master system (new operating system image) on a storage of another system based on the master image (page 1, [0008]; page 3, [0022], [0024]-[0025], lines 1-5 of [0027]; page 4, lines 1-4 of [0032]).

44. It is noted that the preamble is not given patentable weight. Hill is silent in teaching the use and configuration of flags based on the events described above. However, it is well known in the art of computer processing that flags are used to store a binary value or code that has an assigned meaning. Flags are typically found as members of a defined data structure and the meaning of the value contained in a flag will generally be defined in relation to the data structure it is part of. In many cases, the binary value of a flag will be understood to represent one of several possible states or statuses. In other cases, the binary values may represent one or more attributes in a bit field, often related to abilities or permissions, such as “can be written to” or “can be deleted”. One of ordinary skill in the art would have been able to modify Hill such that it would include the well known features of flag handling in computer processing. The suggestion/motivation for doing so would have been to provide the predicted result of having a

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tool to mark or designate data structures for future processing, thus improving the control of the processing.

45. As to claim 13, Hill teaches further comprising automatically providing the clone of the master system with an overlay based on the setting of the flag in the clone of the master system, where the overlay provides file-system level write functionality to the non-writable volume or partition of the clone system (page 3, [0023]).

46. As to claim 14, Hill teaches the storage storing the clone of the master system that was automatically provided with the overlay (page 1, [0008], page 3, [0022]).

47. As to claim 15, Hill teaches the storage storing the clone of the master system (page 1, [0007], page 3, lines 7-9 of [0022]).

48. As to claim 19, it is rejected for the same reasons as stated in the rejection of claim 12.

49. **Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (hereinafter Miller) (US 7,120,786 B2) in view of Hensley (US 6,993,649 B2).**

50. As to claim 16, Miller teaches a method (see Abstract), comprising:

building an operating system install comprising operating system files on a target drive, where the operating system install is configured to have an overlay providing write capability to a non-writable area (col. 3, lines 49-67 through col. 4, lines 1-14); then

performing a first boot of the target drive (see Fig. 4, items 302, 404, 406, col. 2, lines 12-26);

configuring the operating system install to have both a resealed or logical first-boot state (col. 9, lines 13-22, col. 3, lines 49-67 through col. 4, lines 1-14).

51. Miller is silent in having partitions, disabling the overlay, as well as determining that the overlay is needed and has not been initialized. However, Hensley teaches altering a computer operating system to boot and run from protected media such that the memory is partitioned (see Abstract, col. 4, lines 20-42 and 58-60). A write filter (lower file system filter 128) is used to intercept write requests that are not allowed and to redirect them to an “overlay” (col. 5, lines 17-37). An upper file system filter 136 enforces access attributes and can also be used to disable the overlay (col. 5, lines 38-47). Miller and Hensley are analogous art because they are both in the same field of endeavor of booting and reconfiguration. One of ordinary skill in the art would have known to modify Miller such that it would include the features of Hensley. The suggestion/motivation for doing so would have been to provide the predicted result of increased protection from the write filter (Abstract, col. 2, lines 56-64, col. 3, lines 1-22 and 50-55). Therefore, it would have been obvious to one of ordinary skill in the art to combine Miller and Hensley to obtain the invention of claim 16.

52. As to claim 17, Miller teaches further comprising creating a condensed image of the operating system using an imaging tool, where the condensed image is capable of being installed on disk drives with different sizes or configurations (Fig. 1, items 156, 158, 160, 162, Fig. 2, item 202).

53. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (hereinafter Miller) (US 7,120,786 B2) in view of Hill et al. (hereinafter Hill) (US 2003/0221083 A1) in view of Raves et al. (hereinafter Raves) (US 2003/0182500 A1).

54. As to claim 18, Miller teaches a storage storing a condensed (compressed) system image comprising an operating system, where the condensed system image is capable of being exploded to install the operating system on disk drives with different sizes or configurations (col. 3, lines 49-67 through col. 4, lines 1-14, see Fig. 4, items 302, 404, 406, col. 2, lines 12-26).

55. Miller is silent in teaching to self-create an overlay partition and write filter when booted. However, Raves teaches a write filter that redirects write requests to an overlay that could be used with respect to partitioned memory (Fig. 3, "OS", "Mirrored OS"; page 2, lines 3-5 of [0025], last 5 lines of [0023], [0026]). Hill and Raves are analogous art because they are both in the same field of endeavor of operating system imaging. One of ordinary skill in the art would have known to modify Hill such that it would include the feature of partitioning and a write filter when booted, as taught in Raves. The suggestion/motivation for doing so would have been to

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provide the predicted result of improving the write protection system (page 1, [0003]-[0005]).

Therefore, it would have been obvious to combine Hill and Raves to obtain the invention of claim 18.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- **Gschwind et al. (US 7,222,332 B2)** discloses an overlay creation method in a heterogeneous instruction set architecture that separates source code and data into partitioned and unpartitioned sections so that efficient overlay management can be provided (see Abstract)
- **Burkhardt et al. (US 6,993,642 B2)** discloses creating an operating system with selected functionality by booting a computer from an OS image by setting flags to enable functionality (see Abstract).
- **McGrath (US 6,968,446 B1)** discloses flag handling in a computer processing system.
- **Larvoire et al. (US 6,804,774 B1)** discloses a Microsoft Windows image transition tool for assisting a computer user. It has a bootable storage media storing programmed codes that copy files to a disk image so that the operating system finds the required files when a target computer is rebooted (see Abstract).
- **Kim (KR 2004047388)** discloses a system for compressing a high-quality image in real time to reconfigure an operating system and an application (see Abstract).

- **Matsumoto et al. (JP 07160509 A)** discloses an overlay control system for computers that has a second program counter to perform execution of a secondary application without interrupting regular functioning of the operating system and returns the control to the first program counter (see Abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENNETH TANG whose telephone number is (571)272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

/Kenneth Tang/
Examiner, Art Unit 2195